

Name: \_\_\_\_\_

Date: \_\_\_\_\_

A2CC1: Review Sheet for Quarter 1 Quarter Exam

**COMPLETE ALL PROBLEMS ON A SEPARATE SHEET OF PAPER!**

**This is a sampling of the types of questions that we have covered. Be sure to go over your notes, homework assignments, and old tests to fully prepare.**

**Quarter Exam is on Wednesday November 8<sup>th</sup>.**

1) Factor each of the following completely:

a)  $5x^2 - 25x$

b)  $3a^4b^2m - 75a^3bm$

c)  $3x^2 - 48$

d)  $x^2 + 3x - 18$

e)  $5x^2 - 32x - 21$

f)  $4x^2 + 20x + 9$

g)  $15x^3 - 25x^2 + 75x - 125$

h)  $6x + 21$

i)  $16x^8y^4 - 81z^4$

j)  $2x^2 + 20x + 48$

2) Subtract  $(-3 + 2i)$  from  $(3 + 5i)$

3) Write as a power of  $i$  in simplest terms:  $5i^{201}$

4) Solve for x:  $\left(\frac{1}{2}\right)^{1-x} = 4$

5) Rewrite  $3x^{\frac{-2}{3}}$  using radicals

6) Write each of the following in simplest radical form:

a)  $\sqrt{90} + \sqrt{250}$

b)  $\sqrt{98} - 3\sqrt{18}$

c)  $\frac{5\sqrt{20}}{10\sqrt{10}}$

d)  $\sqrt{2}(3\sqrt{18} - \sqrt{8})$

7) Simplify the following and write with positive exponents:

a)  $(12x^3y^2)^2 \left( \frac{x^3y}{4} \right)$

b)  $(xy)^2 (2x)^{-1}$

c)  $\frac{a^{-2}b^4}{a^{-7}b^{-1}c}$

8) Solve each of the following for x:

a)  $(x+2)^{\frac{3}{2}} = 64$

b)  $2x^{\frac{2}{5}} = 32$

c)  $2x^{\frac{1}{3}} - 2 = 3$

d)  $16^{x-1} = 8^x$

e)  $3^{x+82} = 1$